

LEES LANE LANDFILL

LOUISVILLE, KENTUCKY

DRAFT RESPONSIVENESS SUMMARY

This community relations responsiveness summary is divided into the following sections:

Section 1.0 Overview. This section discusses EPA's preferred alternative for remedial action, and likely public reaction to this alternative.

Section 2.0 Background on Community Involvement and Concerns. This section provides a brief history of community interest and concerns raised during remedial planning activities at the Lees Lane Landfill Site.

Section 3.0 Summary of Major Comments Received during the Public Comment Period and the EPA Responses to the Comments. Both written and oral comments are categorized by relevant topics. EPA responses to these major comments are also provided.

Section 4.0 Remaining Concerns. This section describes remaining community concerns that EPA did not address directly during the Remedial Investigation/Feasibility Study, and how EPA proposes to handle these concerns.

In addition to the above sections, Attachment A, included as a part of this responsiveness summary, identifies community relations activities conducted at the Lees Lane Landfill Site prior to and during the public comment period.

1.0 OVERVIEW

At the time of the public meeting and the public comment period, EPA had not selected a single preferred alternative for the Lees Lane Landfill site. Instead the draft feasibility study presented six (6) alternatives. These alternatives address the problems of groundwater contamination, soil contamination and the potential for gas migration into the Riverside Gardens community.

The recommended alternative that will be specified in the decision document involves surface waste area cleanup, bank protection controls, gas collection and venting system, and monitoring. The monitoring program includes sampling groundwater monitoring wells to determine baseline groundwater quality at the site. The surface waste clean-up will reduce the possibility of direct contact since site access is not restricted. The installation of bank protection controls will minimize erosion and failure of the Ohio River bank.

Judging from the comments received during the public meeting and the three week comment period, the residents of Riverside Gardens believe that EPA should consider an alternate solution to the problem. The residents would prefer relocation and buy-out of their homes and property as a viable solution.

Section 3.0 provides a more detailed discussion of individual preferences and concerns.

2.0 Background On Community Involvement And Concerns

Community involvement at the Lees Lane Landfill has centered primarily around Riverside Gardens residents. They established the Riverside Gardens Community Council in 1969. This council was recently headed by Jo Anne Schlatter, but is now under the leadership of Pat Moran.

The first official complaint was filed with the county in 1964, after which complaints from residents of Riverside Gardens were filed frequently. Fires, lack of proper cover, excavation of the flood wall, open dumping, chemical dumping, midnight dumping, and foul odors were all cited complaints filed with the Jefferson County Health Department. Methane gas began entering homes adjacent to the landfill during the spring of 1975.

The Riverside Gardens Community Council is actively monitoring all developments at the landfill and have been highly vocal in expressing their concerns to the county, state, EPA, and the local media.

The major concerns expressed during the remedial planning activities; and how EPA, the county, and state addressed these concerns are described below:

- 1) Has the problem of methane gas been permanently solved or will we be threatened once again?

EPA Response:

Based on the data gathered during the Remedial Investigation, the gas collection system is working toward alleviating problems related to the migration of landfill-gas to the Riverside Gardens area. EPA's recommended remedy involves inspection and repair of the gas collection system along with air and gas monitoring. Therefore, we will be forewarned of any potential problems that might evolve.

- 2) Will air emissions from vented gas pose a health threat to the community?

EPA Response:

EPA is currently implementing an air study at and in the vicinity of the Lees Lane Landfill site to address health related concerns. EPA cannot make a determination regarding these health issues without more representative air data. However, the samples that we have analyzed do not show any elevated levels of contaminants.

- 3) Local officials questioned know whether EPA would fund a long-term monitoring and gas venting system.

EPA Response:

EPA's recommended alternative includes inspection and repair of the monitoring and gas venting system. Responsible parties for the site will be given an opportunity to implement this remedy. If they choose not to participate, then Superfund monies will be appropriated, if applicable. Operation and Maintenance (O&M) will be provided by EPA for one year and the State will be responsible for the remainder of the O&M period.

- 4) What about the potential for groundwater contamination?

EPA Response:

EPA recognizes that there is a potential for groundwater contamination from the site. Therefore, EPA's recommended remedy includes groundwater monitoring for a period of time.

- 5) What are the contaminants in the landfill and what effect will these have on the community?

EPA Response:

The site was used for disposal of domestic, commercial, and industrial waste. Due to health risks involved with drilling through the fill, the nature and extent of the waste was not characterized.

Based on the Remedial Investigation, a Health Assessment was developed which evaluated potential health risks associated with the presence of hazardous substances at the site and the effects of these substances on groundwater, surface water and sediment. The assessment concluded that there was no current evidence of an offsite problem related to the landfill site. (The presence of hazardous substances in the air or landfill gas is currently being addressed though a separate EPA study and will be evaluated in a separate report at a later time).

- 6) Is there a health threat from the chemicals migrating off site?

EPA Response:

The Public Health Assessment in the Remedial Investigation concluded that there is no current evidence of an offsite problem related to the groundwater, surface water, or sediment at the landfill site. (A separate air study is presently being conducted by the EPA and the results will be evaluated in a later report). If an offsite migration problem does evolve, then the issues will be evaluated.

- 7) Since people are hunting and our children are still playing on the property, what is EPA going to do about the open access to the landfill?

EPA Response:

EPA's recommended alternative will include posting cautionary signs. These signs will inform the public of the site conditions and potential risks.

- 8) How will you keep us, public officials, up-to-date on site activities and plans that EPA is developing?

EPA Response:

EPA will keep the State informed of site activities and plans for the site. The State requested that they be responsible for contacting county and local officials.

- 9) Will the landfill ever be used as a dump again? Can it be developed? Can access to the river be restored? Will the community ever be able to use the land?

EPA Response:

Future land use for the site has not been determined.

- 10) Jefferson County wanted to know whether the Superfund Program would pay for both past and future cleanup costs?

EPA Response:

Since responsible parties have been identified for this site, they will be given the opportunity to settle the cleanup costs with the Agency. If they choose not to come forward and Superfund monies are expended, the Agency may seek legal recourse to recover the monies spent.

3.0 SUMMARY OF PUBLIC COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD
AND AGENCY RESPONSES

Comments raised during the Lees Lane Landfill Site public comment period are summarized briefly below. The comment period was held from October 15 to November 6, 1985 to receive comments from the public on the draft Remedial Investigation/Feasibility Study. The comments received during the comment period are categorized by relevant topics. At the time of the public comment period, EPA had not selected the recommended alternative.

Technical Questions/Concerns Regarding the Site History

1.0 What chemicals were found in the 400 drums in the landfill?

EPA Response: Organics, heavy metals, phenol, and benzene were found in the drums.

2.0 What was the condition of the 400 drums found on the landfill?

EPA Response: The exposed drums were badly rusted.

Technical Questions/Concerns Regarding RI/FS

3.0 Do you know if there is any groundwater contamination at locations other than where you sampled?

EPA Response: The groundwater program in the RI was used as a basis to determine the overall groundwater quality on and off site.

4.0 How do we remove the barrels out of the landfill? How do you clean up the landfill? We would like to see the waste removed.

EPA Response: The only technology that would actually be able to take the waste out would be excavation. The material itself could be either incinerated or taken to an approved landfill for disposal.

5.0 Will you excavate the entire landfill?

EPA Response: At this time EPA has not decided on the remedy.

6.0 Has EPA or any other level of government considered relocating the residents in the neighborhood?

EPA Response: EPA has not considered relocation as a remedial alternative.

- 7.0 This study is incomplete because only certain areas were investigated.

EPA Response: The Remedial Investigation was designed to adequately characterize the site. Due to both time and cost factors involved, it was impossible to cover all areas.

- 8.0 Why wasn't a fence put around the site? Why weren't warning signs posted to keep people off the landfill?

EPA Response: Posting signs and erecting a fence will not necessarily limit the number of people from going on site. People will climb the fence and the signs will be ignored. However, EPA is considering posting signs as part of the remedial alternatives.

- 9.0 According to the report, the 212,000 tons of waste were used to estimate the total amount of waste in the landfill. So am I correct in saying that the 2.4 million cubic yards is just from the four companies?

EPA Response: The total volume of waste estimated in the landfill was 2.4 million cubic yards. This number was derived by geophysical methods and also information gathered during the Remedial Investigation.

- 10.0 You stated that there were two residential homes and a church on wells that are being used for a water supply. I know positively that there are five families.

EPA Response: We would appreciate their names and addresses. During the RI we canvased the neighborhood in an effort to find every well we could.

EPA Clarification: The final Remedial Investigation/Feasibility Study Reports identified a total of 8 private drinking water wells in the Riverside Gardens neighborhood.

- 11.0 What do you think will happen when the chemicals that are in the landfill go into the Ohio River?

EPA Response: In order to determine the worst case for potential groundwater contaminants to enter the Ohio River, the groundwater flow was calculated using the highest permeability value and hydraulic gradient. The dilution rate was estimated to be 67,000 to 1. This means that the flow rate in the Ohio River is so great that it is 67,000 parts of Ohio River to every one part that comes out of the landfill.

12.0 What do you have to say about the radioactive waste over there?

EPA Response: Radiation was not detected at the site during our site investigation.

13.0 How much did the study cost?

EPA Response: The cost of the study should be around \$500,000.

14.0 Have any PVC's or any other cancer causing chemicals been found at the landfill?

EPA Response: Benzene and polyvinyl chloride were detected in one of the gas studies.

15.0 Did the 212,000 tons of waste just come from four companies? In the report it states that over 100 companies dumped in the landfill. Do you have records of how much they dumped?

EPA Response: Yes, the four companies are responsible for the 212,000 tons of waste. We do not have records of how much the other 96 companies dumped at the landfill. Identifying companies and the amount of waste they dumped is a part of the enforcement process.

16.0 A citizen stated that he knows that the sand pits were at least 150 to 200 feet deep.

EPA Response: EPA based their estimated depth on the data collected during implementation of the gas collection system. The maximum depth of waste which was detected is approximately 40 feet. The water table is approximately 50 feet below the ground surface. To excavate beyond 50 feet would require a dewatering process. If the site is 100 feet deep, this means we have miscalculated the quantity of waste and therefore the cost to remove the waste would be greater than we estimated. This calculation would only be important if excavation was chosen as the recommended remedy.

17.0 What does EPA plan to do with the drums that are along the river?

EPA Response: As part of the remedial action, the drums will be sampled and if they are hazardous, they will be removed.

EPA Clarification: The Feasibility Study includes the removal of these drums. Prior to removal, samples will be collected for use in determining the proper means of disposal.

18.0 A citizen stated that the liquid is running out of the drums into the Ohio River. I am concerned about our water supply.

EPA Response: The Emergency Response Unit inspected the drums and concluded that they did not pose an immediate threat to the public, and therefore, did not require an emergency removal. It was decided that these drums would be addressed during the remedial action phase.

Questions/Concerns Related to Gas Migration

- 19.0 Why wasn't the venting system maintained after it was installed to control the migration of methane gas to Riverside Gardens?

EPA Response: This question should be referred to the county government. The Public Works Department is responsible for Operation and Maintenance of the gas collection system.

- 20.0 Initially, I believe you were trying to keep us from being blown up in an explosion by the gas. But now it appears that you are suffocating us. The vent pipe is blowing all over Riverside Gardens. Am I right or wrong?

EPA Response: Supposedly, the system was designed to burn the gas off before it is vented to the atmosphere. Although I'm not sure if the gas is being burned, I do know that the blower house is working because you can hear it blowing.

EPA Clarification: A burner was not installed as part of the gas collection system.

- 21.0 What if rocket fuel was dumped into the landfill? There is a rumor that a local chemical company manufactured rocket fuel for Redstone Arsenal.

EPA Response: I assume you are talking about hydrozene, the most common rocket fuel used today. If it were spilled or dumped out, it would have volatized, hence, no longer being a problem. If it hasn't been exposed to the air, then it would depend on the concentrations in the well.

- 22.0 The generation of methane could last 20 years based on EPA's fifty foot depth of the waste in landfill. So, if it is 100 to 150 feet deep, does that mean a 60-year time period of methane being generated in the landfill.

EPA Response: It would be hard to estimate how long methane will be generated in the landfill. The amount of time that methane can be generated varies.

- 23.0 Wouldn't it have been feasible to find out which way the wind blew before the venting system was ever installed?

EPA Response: We have a report that shows the prevailing wind direction most of the time. However, the wind doesn't blow in the same direction all the time.

- 24.0 Is this venting system safe?

EPA Response: Yes, the system is safe if it is operating properly and if the gas is being burned.

EPA Clairification: Based on our knowledge if the venting system is operating properly, the system is safe.

25.0 Do you have a pump that is pumping the gas?

EPA Response: The gas collection system was designed to include a series of 31 wells. They are all tied into a common header and they are under negative pressure. They pull all this gas into the blower house.

26.0 Is the gas burned or just discharged into the atmosphere?

EPA Response: They should have a propane supply down there that actually burns this gas.

Correction to EPA Response: EPA's response was not correct. The gas venting system was designed to have a burner but it was decided by the county not to include it. The gas would be vented to the atmosphere.

27.0 How often is the pump checked?

EPA Response: You need to check with the county. They are responsible for maintaining the venting system.

28.0 How can we believe you, the EPA, the County Health Department and county government when the venting system has been allowed to get in its present condition?

EPA Response: Again, the upkeep of the venting system was the responsibility of the Public Works Department, Jefferson County. If the repair of the system is chosen as one of the recommended alternatives, then the operation and maintenance of that system will be the responsibility of EPA the first year, then it will be the state's responsibility.

29.0 Did the county receive the report in December of '84 that reported the venting system was working at 42 percent? Why didn't the company that did the gas evaluation report send a copy to the county.

EPA Response: That was an oversight, probably on EPA's part. If the conclusions drawn from that study had determined that there was a 'great threat to the public health, everyone would have been made aware of the danger. The report was included as part of the remedial investigation and feasibility study and the county was given that report.

30.0 How long was the venting system off and what amount of time did it take with the system off for the gas to be detected?

EPA Response: I have no idea. When we saw the data that showed a reading, we did question them. The data sheet said the blower house was off. That is what drove us to the conclusion that when the blower house is on, that the system is still working.

- 31.0 Is special monitoring being conducted in areas where the test wells are located to find out if anything has been migrating in those particular areas?

EPA Response: The field work was completed before we were made aware of the residents complaints. When it was brought to EPA's attention we did in fact come out and sample. We have also committed to further sampling and monitoring. We have been working with Pat Moran trying to find out when there are complaints of the gas in the neighborhood. When the odor is detected, we will be available to come down and do some air sampling. As far as the air sampling is concerned it is not cut and dry. We are still committed to coming out and addressing that issue.

- 32.0 What do you have to compare with the air samples in 1984?

EPA Response: Gas well air samples from the previous studies are included in this report. These samples were taken in probes I-3B, I-4B, I-5B and I-10B. I don't believe ambient air samples are included in the report because the ambient air samples did not detect anything. Ambient air samples were taken. I have copies of the results back in my office which can be made available to you.

- 33.0 What does it mean when the report talks about the volume of the methane in the wells being 83 percent?

EPA Response: If you have a cup filled with 100 percent of air, 83 percent of the air would be methane.

- 34.0 Do you know the percentage of the methane that is being vented into the atmosphere?

EPA Response: I have no idea. I don't think a sample has ever been pulled from that vent. However, if methane was being vented into the atmosphere, it would not be a volume of 83 percent because the atmosphere has a larger volume than the well space.

- 35.0 If a test were done on one of the venting systems that was working properly, you should have zero methane, or no trace of methane, is that right?

EPA Response: Right, (if there is a burner on the gas collection system) there should be no methane, but as far as I know no samples have been taken.

EPA Clairfication: There is no burner on the gas collction system and therefore, methane should be detected in the exhaust.

Health Related Questions/Concerns

- 36.0 What adverse health effects are we being subjected to by breathing this air daily which contains chemicals/gases from the landfill?

EPA Response: EPA has committed to doing more air monitoring in the neighborhood. At this time none of the studies show that there are ambient air problems.

- 37.0 Has EPA or CDC canvassed the neighborhood to see if there are any birth defects or a type of cancer which is prevalent in the neighborhood? How can you say that there is no problem yet, since you haven't gone to the neighborhood to see?

EPA Response: To answer your first question, no, we have not canvassed the community. And at this point we have no intentions of doing it as you propose. The main reason being, we see no indication that there is an imminent public health threat being posed to people living in Riverside Gardens from Lees Lane Landfill. If that were the case, we would work cooperatively with both the Louisville and Jefferson County Health Department and the State Health Department in Frankfort to determine whether or not the alleged problems may in fact be due to or were due to exposures to substances coming from the site.

- 38.0 This site appears to be similar to Love Canal. No, the school isn't located on top of the landfill, but the community is around the landfill. At Love Canal the barrels started surfacing and it took them a long time before they finally got the EPA and everybody to say that there was a problem. I wouldn't want that to happen here.

EPA Response: I agree with what you are saying. That is one of the reasons that we have listed monitoring in all the remedial alternatives so that we would be able to identify a problem if one arises and also define the extent of the problem.

- 39.0 Would you feel safe with your families living in this neighborhood?

EPA Response: Based on the data and information we have looked at so far, yes I would. The site does not pose an imminent health threat but the area is unsafe for children playing at the site.

- 40.0 Have you talked with the Fire Department or the Police Department about what goes on back here? The Fire Department evacuated a family in 1983 for two nights, allegedly because of dangerous gas from the landfill.

EPA Response: No, we have not talked with these two departments but we are interested in their opinion.

- 41.0 How dangerous is the water to us when the groundwater level is up for just a short period of time?

EPA Response: It should not be dangerous at all.

- 42.0 What about future health concerns? What are we going to learn in the next five to ten years from living in these conditions?

EPA Response: One of the things we hope you try to realize, and be sensitive to as well, is that we don't have all the answers. There is a lot that we don't know, and we just have to deal with that the best we can.

- 43.0 Everything that I have read in the report talks about explosion potential and so forth. What about health effects from the gas, especially when the water level has been up for three or four months?

EPA Response: In order to fully address your concerns, we need to first establish a link or have a strong suspicion that a link exists between the residents' health complaints and the landfill.

Technical Questions/Concerns Regarding Future Actions

- 44.0 Could an industry be put on the landfill after your next action?

EPA Response: This decision will be made by the county zoning department.

- 45.0 Why not let the City of Louisville buy this whole neighborhood and make a dump out of it?

EPA Response: We cannot respond to that question.

Questions/Concerns regarding the Superfund Process

- 46.0 Is this the only input we will get or do the people have anything to say about the remedial decisions? Are you just going to take our opinion and then you (EPA) make the decision?

EPA Response: The process works as follows: After tonight you will have until November 6th to comment on the remedial reports. We will then respond to those comments in a responsiveness summary. You will be informed on the selected remedy.

- 47.0 So how do we get people to respond? Do we have to write letters? What do they have to do?

EPA Response: You should send your written comments to the EPA office, addressed to me, Beverly Houston. Our address may be found in the back of the fact sheet. We would like to strongly encourage you, if you do have a question or a concern, to make us aware of it. All comments will be included in the responsiveness summary, including those made here tonight.

Question/Concerns Related to the Enforcement Process

- 48.0 Are there any funds available to do any remedial action down here?

EPA Response: Since this is an enforcement site, there are potentially responsible parties (PRP's). PRP's are people responsible for putting the waste in the landfill. The enforcement section at EPA is currently in the process of identifying and noticing those people that there is a problem and also giving them the opportunity to actually implement whatever remedial action is determined to be correct remedy. So the first option is to try to get the potentially responsible parties to come forth and pay for the clean-up. If the PRP's say no, we are not going to do anything, then EPA will come forth and actually implement the remedy. Once the PRP's have been notified, they will have 60 days to come forth and commit to doing the remedial action. So at this point it is hard to say who will pay for the clean-up.

Written Comments/Questions Received by the Agency

- 49.0 "Has any calculation been made of the anticipated levels of methane and other gas production, and production of volatile organics, over the future life of the landfill? How can a collection system be designed, without knowing the anticipated production levels which it will be designed to handle?"

EPA Response: We are not aware of any calculations being made of the anticipated levels of methane and other gas production, and production of volatile organics, over the future life of the landfill. The gas collection system was designed to prevent the gas in the landfill from migrating to the Riverside Gardens area. Gas production levels were not directly utilized in the design of the system.

EPA Clarification: Concentrations of contaminants are not necessary to design a collection system but could impact a treatment system if one were necessary.

- 50.0 "Has any testing been conducted by EPA to determine the nature and threat from the 11 unidentified organics that were detected by IT Corporation in the assessment of the gas collection system? What are the constituent toxics being collected and emitted into the community from the gas collections system?"

EPA Response: EPA is currently conducting an air study at and in the vicinity of the site. In this investigation target and non-target compounds are being identified. Target compounds identified in the parts per billion range were vinyl chloride, benzene, toluene, ethylbenzene, and xylene.

EPA Clarification: Concentrations of contaminants are not necessary to design a collection system but could impact a treatment system if one were necessary.

- 51.0 "The county gas collection system apparently did not include the designed gas burner. What stack monitoring has and will be conducted to determine the organics content of the gas which is now being collected, concentrated and emitted into the vicinity of the Riverside Gardens neighborhood? What ambient monitoring is being conducted on a continuing basis (rather than on one dry-weather day) to determine the ambient levels of gases in the neighborhood?"

EPA Response: EPA is currently conducting an air study at and in the vicinity of the site. Representative samples are being collected over varied times and climatic conditions. Stack, background, indoor and outdoor samples are being collected.

EPA Clairfication: The air monitoring system proposed in the Feasibility Study includes six sampling stations on the landfill that would be monitored three times a year. This program may be altered as a result of the air sampling currently being conducted by EPA.

- 52.0 "What testing has been conducted at the Putman Avenue sites where the high concentrations of methane and organic-laden gases were first detected in 1975 in order to determine whether the county gas collection system is functioning so as to control gas migration? What testing will be conducted to determine the current degree of gas migration?"

EPA Response: Two residences on Putman Avenue have been selected as target areas for sampling during the current air investigation being conducted by EPA.

EPA Clarification: The Feasibility Study includes the installation of four gas monitoring wells between the landfill and Riverside Gardens. In addition, one well will also be located on Putman Avenue.

- 53.0 "What follow-up drilling will be conducted on-site to determine actual depth of stored waste?"

EPA Response: At this point in the investigation, there is no follow-up drilling planned on-site. The actual depth of the stored waste will be a major factor only if excavation is chosen as an alternative. Due to the health risks associated with drilling through the fill it is not being considered at this time. resources.

- 54.0 "EPA tested for chemicals in these homes; they failed to test for methane. We would like to know why this happened. If we are sitting on top of methane, then our homes ought to be tested for it."

EPA Response: The combustible gas unit will be utilized in the future air investigations. In the January '86 air sampling investigation homes were tested for methane using the combustible gas unit. Methane was not detected in any of the homes.

I should also emphasize that methane is an asphyxiant gas, not one of the hazardous substances that are addressed by EPA. Therefore, EPA has focused primarily on the toxic gases that may be mixed with the methane gas.

- 55.0 "I am wondering why Hofgesang can't be made responsible for landfill."

EPA Response: The Hofgesang Foundation has been named as one of the Potentially Responsible Parties. As such, they will be given an opportunity to participate in the clean-up remedy. If they choose not to participate, the Agency may seek other legal recourses.

- 56.0 "Should a burner be installed in the gas collection and venting system?"

EPA Response: At this point into the project we can not make a determination on whether a burner is needed. After sufficient air data is collected and reviewed, EPA will evaluate the need for a gas collection system burner. However, for cost purposes in the FS, a burner was included in the remedial alternatives.

- 57.0 "The once per quarter monitoring proposed in this and all alternatives is totally inadequate."

EPA Response: The decision to monitor quarterly was based on the following factors: (1) the number of receptors to groundwater, (2) the groundwater flow rate and (3) cost factors. Also, RCRA compliance status requires four quarters of groundwater data to determine baseline groundwater conditions.